

CALCULATION OF 10-YEAR U. S. TREASURY NOTE FUTURES' IMPLIED INTEREST RATE

The interest rate implied by the price of a U. S. Treasury note futures contract is calculated as follows:

$$(Price\ of\ Contract)\ X\ 1,000 = \frac{\$3,000}{(1 + i)^1} + \frac{\$3,000}{(1 + i)^2} + \dots + \frac{\$3,000}{(1 + i)^{20}} + \frac{\$100,000}{(1 + i)^{20}},$$

where i = the semi-annual rate of return and the maturity is assumed to be 10 years.

The implied annual rate of return on a 10-year U. S. Treasury note futures is calculated as:

$$\text{Annual Rate of Return} = (1 + i)^2 - 1.$$

The U. S. Treasury note futures contract prices shown below are averaged, by contract maturity, using the Friday settlement prices for all contracts trading for the entire month of September in 2003 that had significant open interest. Data are obtained from *The Wall Street Journal*.

U. S. 10-YEAR TREASURY NOTE FUTURES CONTRACT DATA

Contract					Average	Implied
<u>Maturity</u>	<u>09/05/03</u>	<u>09/12/03</u>	<u>09/19/02</u>	<u>09/26/03</u>	<u>Price</u>	<u>Yield</u>
12/03	110.9531	111.9531	112.5469	113.8281	112.3203	4.51%